WHAT IS CLAIMED IS:

1. A process for the production of a cellular composite comprising:

(A) preparing a mixture of (1) a polyisocyanate and (2) water;

(B) adding the mixture formed in (A) to (3) inorganic hollow microspheres under low shear mixing;

(C) completely filling a mold with the mixture formed in (B); and

(D) heating the filled mold at a temperature of from 100 to 280°C;

thereby reacting the polyisocyanate and water to form a polyurea which binds the hollow microspheres, thus forming a cellular composite.

2. The process of Claim 1, wherein the mixture formed in (A) additionally comprises: one or more additives.

3. The process of Claim 1, wherein the mixture formed in (A) is added in (B) to (3) inorganic hollow microspheres additionally comprising one or more additives, under low shear mixing.

4. The process of Claim 1, wherein (D) said heating is at a temperature of from 125 to 150°C.

5. The process of Claim 1, wherein (B)(3) said inorganic hollow microspheres are selected from the group consisting of glass, silicates, boro-silicates, ceramic, fly-ash and mixtures thereof.

6. The process of Claim 1, wherein (A)(1) said polyisocyanate is characterized by an NCO group content of from 25 to 35% by weight, and a functionality of from 2.0 to 3.5, a viscosity of less than about 500 mPa·s at 25°C, and is selected from the group consisting of aromatic polyisocyanates, and adducts and mixtures thereof.

7. The process of Claim 1, wherein (A)(2) said water is present in an amount such that there is an excess of from 2 to 5 times the

stoichiometric quantity required based on the NCO group content of (A)(1) said polyisocyanate.

8. The process of Claim 1, wherein (D) said heating continues from 0.5 to 60 minutes.

9. A cellular composite produced by the process of Claim 1.